



# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,942	02/23/2006	Max C. Schuermann	GK-OEH-222/500814.20124	4569

26418 7590 04/06/2007  
REED SMITH, LLP  
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599 LEXINGTON AVENUE, 29TH FLOOR  
NEW YORK, NY 10022-7650

EXAMINER
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LEE, JOHN R

ART UNIT	PAPER NUMBER
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2878

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/567,942

Applicant(s)

SCHUERMANN ET AL.

Examiner

John R. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 33 is/are allowed.
- 6) ☒ Claim(s) 18-32, 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/10/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 18 is objected to because of the following informalities: In claim 18, line 5, "jet, proceeds" should be "jet proceeding" or "jet that proceeds." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18-32 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 is indefinite because it is not clear as to what "along an axis of the mean direction of propagation of the radiation" in lines 3-4 refer to. Does this phrase refer to the solid angle or radiation; if so, the claim should be revised to make this clear. If not, then the phrase does not make sense since the gas curtain goes across the axis of radiation propagation.

In claim 26, line 2, "the current" lacks appropriate antecedent basis.

Claims 2-32 are indefinite by virtue of their claim dependency upon claims 18 and/or 26.

In claim 34, line 6, the claim is not clear as to what is meant by "which works so as to be directed away from the annular center." It does not make sense for the diffuser

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to "work" that way. It seems that this should be referring to directing the gas away from the center, not directing the diffuser itself way from the center.

***Allowable Subject Matter***

Claim 33 is allowed.

Claim 18-32 and 34 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: Claim 33 is allowed because the prior art fails to teach or fairly suggest an arrangement for generating a gas curtain as a filter for particles in radiation having a mean propagation along an axis and comprising, in addition to the other limitations of this claim, a gas jet vacuum pump with a propulsion nozzle being arranged on an axis for generating a supersonic gas jet for a gas curtain and directing the gas jet radially to an annular mixing nozzle; said mixing nozzle coaxial with the axis, and a diffuser provided as claimed.

Claim 34 would be allowable because the prior art fails to teach a gas jet vacuum pump having the arrangement of annular mixing nozzle, propulsion nozzle, and diffuser arranged and functioning as claimed.

Claims 18-32 would be allowable because the prior art fails to teach or fairly suggest a plasma radiation source having the above mentioned gas curtain arrangement.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Bisschops references and Henion et al. references teach gas curtains and associated devices as are well known in the art.

Any inquiry concerning this communication should be directed to John R. Lee at telephone number (571) 272-2477.

  
JOHN R. LEE  
PRIMARY EXAMINER